

Challenges to implementing artificial intelligence in healthcare: a qualitative interview study with healthcare leaders in Sweden

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Abstract

Background Artificial intelligence (AI) for healthcare presents potential solutions to some of the challenges faced by health systems around the world. However, it is well established in implementation and innovation research that novel technologies are often resisted by healthcare leaders, which contributes to their slow and variable uptake. Although research on various stakeholders' perspectives on AI implementation has been undertaken, very few studies have investigated leaders' perspectives on the issue of AI implementation in healthcare. It is essential to understand the perspectives of healthcare leaders, because they have a key role in the implementation process of new technologies in healthcare. The aim of this study was to explore challenges perceived by leaders in a regional Swedish healthcare setting concerning the implementation of AI in healthcare. **Methods** The study takes an explorative qualitative approach. Individual, semi-structured interviews were conducted from October 2020 to May 2021 with 26 healthcare leaders. The analysis was performed using qualitative content analysis, with an inductive approach. **Results** The analysis yielded three categories, representing three types of challenge perceived to be linked with the implementation of AI in healthcare: 1) Conditions external to the healthcare system; 2) Capacity for strategic change management; 3) Transformation of healthcare professions and healthcare practice. **Conclusions** In conclusion, healthcare leaders highlighted several implementation challenges in relation to AI within and beyond the healthcare system in general and their organisations in particular. The challenges comprised conditions external to the healthcare system, internal capacity for strategic change management, along with transformation of healthcare professions and healthcare practice. The results point to the need to develop implementation strategies across healthcare organisations to address challenges to AI-specific capacity building. Laws and policies are needed to regulate the design and execution of effective AI implementation strategies. There is a need to invest time and resources in implementation processes, with collaboration across healthcare, county councils, and industry partnerships.